

Application No. 10/029,917
Amendment dated September 16, 2004
Reply to Office action of August 13, 2004

REMARKS:**Status Of Claims**

Claims 1-42 were previously pending, claims 16 and 34 have been amended, and new claims 43-46 have been added. Thus, claims 1-46 are currently pending in the application with claims 1, 10, 20, 28, and 43 being independent.

Office Action

In the office action, the Examiner rejected claims 1-6, 8, 10-25, and 27 under 35 U.S.C. 103(a) as being unpatentable over Abe, U.S. Patent No. 6,088,652, in view of Berstis, U.S. Patent No. 6,182,010, and Nanba et al., U.S. Patent No. 5,739,772. The Examiner also rejected claim 7 under 35 U.S.C. 103(a) as being unpatentable over Abe, Berstis, and Nanba in further view of Yokoyama, U.S. Patent No. 6,236,276. The Examiner also rejected claims 9 and 26 under 35 U.S.C. 103(a) as being unpatentable over Abe, Berstis, and Nanba in further view of Kaneko, U.S. Patent No. 5,729,109. The Examiner also rejected claims 28-33 and 35-42 under 35 U.S.C. 103(a) as being unpatentable over Abe, Berstis, and Nanba in further view of Harada, U.S. Patent No. 6,052,645. The Examiner also rejected claim 34 under 35 U.S.C. 103(a) as being unpatentable over Abe, Berstis, Nanba, and Harada in further view of Yokoyama. Applicant respectfully submits that the currently pending claims distinguish the present invention from Abe, Berstis, Nanba, Yokoyama, Kaneko, Harada, and the other prior art references of record, taken alone or in combination with each other.

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Specifically, claim 1 recites displaying "an overlay screen on top of any presently displayed screen, the overlay screen adapted to display a preview of the decision point, ***including a highlighted portion indicating a course to follow through the decision point, and the overlay screen displays motion of the device on the course through the decision point***", emphasis added. Similarly, claim 10 recites "an overlay screen on top of any presently displayed screen, the overlay screen adapted to display a preview of the decision point, the overlay screen including cartographic data accurately depicting a geographic detail of the decision point, the geographic detail ***including a highlighted portion indicating a course to follow through the decision point, and wherein the overlay screen displays motion of the device on the course through the decision point***". Thus, the overlay screen itself displays both the "highlighted portion" and "motion of the device".

As stated on pages 2 and 3 of the specification of the present application, the present invention seeks to improve upon prior art devices that show static images overlaid on a map to aid a user in navigation. For example, these static images may include an arrow to indicate a turn, either left or right. As discussed in the present application, these static images are of little use as "they generally do not provide enough instructional aid to a user in unfamiliar surroundings, particularly in a congested network of thoroughfares. Moreover, these devices do not provide any added assistance to negotiate among the many courses of action which match the instruction of the precanned bitmap symbol in a crowded network of thoroughfares. In other words, a left turn arrow symbol does not assist a user to understand which of several immediately approaching left turns to take."

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In forming the current obviousness rejections, the Examiner cited Abe, which discloses a basic mapping navigation device. The Examiner also cited Berstis, which discloses an overlay having a more detailed view of an Intersection. The Examiner acknowledges the neither Abe nor Berstis show an overlay screen that displays both the "highlighted portion" and "motion of the device", as claimed in claims 1 and 10. Therefore, the Examiner further cited Nanba, which discloses displaying a highlighted route and motion along that route. Finally, the Examiner asserted that it would have been obvious to combine the above teachings and that such combination would yield Applicant's claimed invention. Applicant respectfully disagrees.

Obviousness, it will be appreciated, can be a problematic basis for rejection because the Examiner, in deciding that a feature is obvious, has benefit of the Applicant's disclosure as a blueprint and guide, whereas one with ordinary skill in the art would have no such guide, in which light even an exceedingly complex solution may seem easy or obvious. Furthermore, once an obviousness rejection has been made, the Applicant is in the exceedingly difficult position of having to prove a negative proposition (i.e., non-obviousness) in order to overcome the rejection. For these reasons, MPEP § 2142 places upon the Examiner the initial burden of establishing a *prima facie* case which requires, among other things, that there be identified some motivation or suggestion in the prior art or in the knowledge of one with ordinary skill to modify the reference or to combine reference teachings. If the Examiner fails to establish the requisite *prima facie* case, the rejection is improper and will be overturned. *In re Rijckaert*, 28 USPQ2d 1955, 1956 (Fed.

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Cir. 1993). Only if the Examiner's burden is met does the burden shift to the applicant to provide evidence to refute the rejection.

Specifically, the Examiner must satisfy three criteria in order to establish the requisite *prima facie* case of obviousness: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine their teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference (or combination of references) must teach or suggest all the claim limitations. MPEP §706.02(j), citing *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991).

In meeting this initial burden, the Examiner "cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention". *In re Fine*, 5 USPQ 2d 1596,1600 (Fed. Cir. 1988). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on the applicant's disclosure. *In re Vaeck*, 1442 (Fed. Cir. 1991). Thus, "[m]easuring a claimed invention against the standard established by section 103 requires the oft-difficult but critical step of casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. See e.g., *W. L. Gore & Assoc., Inc. v. Garlock, Inc.*, 220 USPQ 303, 313 (Fed. Cir. 1983).

Furthermore, "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 23 USPQ2d 1780, 1783-84

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(Fed. Cir. 1992); see also *In re Gordon*, 221 USPQ2d 1125, 1127 (Fed. Cir. 1984). Additionally, "if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." MPEP §2143.01.

In the present case, there is no suggestion or motivation to combine the teachings of Abe, Berstis, and Nanba. In fact, each reference actually teaches away from the present invention, as claimed in claims 1 and 10. Abe discloses a navigation device where an "enlarged display" is used to replace any presently displayed screen when the device nears an intersection. Abe is directed to solving a problem when the device is near the intersection and intermittently switches back and forth between the presently displayed screen and the enlarged display. Abe simply does not even suggest the possibility of "an overlay screen on top of [a] presently displayed screen", much less the other limitations of claims 1 and 10.

Berstis discloses using a static "photographic image 92 of intersection 90" which may be displayed "in a pop-up window 93". To further aid the diver, a "direction arrow 96 [may be] superimposed on the [static] image". In either case, Berstis' system is similar to that discussed on pages 2 and 3 of the present application, as noted above. As Berstis discloses using a static "photographic image", Berstis cannot display either the "highlighted portion" or "motion of the device", as claimed in claims 1 and 10.

More specifically, Berstis cannot be modified to include a "highlighted portion", as claimed in claims 1 and 10, because that would require that Berstis's system store a version of the "photographic image" for each possible route through the intersection. For

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a simple four-way intersection, there are twelve possible routes through that intersection. Therefore, Berstis would have to store twelve images for each simple four-way intersection, in order to include the "highlighted portion" claimed in claims 1 and 10. This would place incredible storage and processing requirements on Berstis' system, hopelessly bogging it down, not to mention driving the cost up astronomically. Furthermore, the storage and processing power required would simply not fit in many automobiles.

Finally, it should be obvious that any attempt to show "motion of the device", as claimed in claims 1 and 10, would be impossible with a single, still photographic image. Thus, any such modification to Berstis would render it "unsatisfactory for its intended purpose", and therefore there can be "no suggestion or motivation to make the proposed modification" to Berstis, as discussed above.

Similarly, Nanba also discloses using static images, such as turn arrows. As stated in the present application, and noted above, "a left turn arrow symbol does not assist a user to understand which of several immediately approaching left turns to take." While Nanba does disclose displaying a highlighted route and displaying motion along the route, Nanba is strictly limited to displaying these on a base map rather than on "an overlay screen on top of [a] presently displayed screen", as claimed in claims 1 and 10. Furthermore, as Nanba's arrows are static, they cannot possibly show "motion of the device", as claimed in claims 1 and 10.

In fact, rather than trying to show a highlighted route or displaying motion along the route in an overlay, as described in the present application and claimed in claims 1 and 10, several of Nanba's arrows "are overlapped in layers up to the destination". As each arrow

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represents a suggested course of action for an upcoming intersection, modifying Nanba's system such that these arrows displayed both the "highlighted portion" of a route and "motion of the device", would be very problematic and confusing. For example, Nanba can display multiple arrows precisely because they are static and do not require further processing resources, once they have been generated for the display. In other words, precisely because these arrows are not updated to show "motion of the device", it is possible to overlap them in layers, as disclosed by Nanba. If, however, these arrows were somehow modified to show motion, the resulting processing resources required to continuously update multiple windows to display motion would lead to the space and cost problems discussed above with respect to Berstis.

Finally, as stated in MPEP §2143.03, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970).

In the present case, the prior art made of record simply does not teach each limitation of claims 1 and 10. For example, claims 1 and 10 each require "an overlay screen" to be displayed on top of a "presently displayed screen" and each also require the overlay screen itself to display both the "highlighted portion" of a route and "motion of the device". While Applicant concedes that displaying the "highlighted portion" of the route and "motion of the device" on a map is well known in the art, displaying these features on an overlay is simply not shown or even suggested by the references made of record. In

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contrast, as discussed above, the references made of record actually teach away from these limitations. Thus, the references made of record do not disclose, suggest, or make obvious "an overlay screen on top of any presently displayed screen, the overlay screen adapted to display a preview of the decision point, including a highlighted portion indicating a course to follow through the decision point, and the overlay screen displays motion of the device on the course through the decision point", as claimed in claim 1. Similarly, the references made of record do not disclose, suggest, or make obvious "an overlay screen on top of any presently displayed screen, the overlay screen adapted to display a preview of the decision point, the overlay screen including cartographic data accurately depicting a geographic detail of the decision point, the geographic detail including a highlighted portion indicating a course to follow through the decision point, and wherein the overlay screen displays motion of the device on the course through the decision point", as claimed in claim 10.

As the Examiner has failed to identify a motivation, found in the prior art, to combine such references or prior art that teaches each of the claimed limitations, the Examiner has failed to establish the requisite *prima facie* case of obviousness with regard to the current obviousness rejections. Therefore, the current obviousness rejections cannot be sustained.

Claim 4 recites "wherein the magnified display scale [of the overlay screen] is a dynamic display scale based on a road classification for a thoroughfare on which the device is currently traveling". In other words, the magnification of the overlay screen is dependent upon the road classification of the thoroughfare. For example, if the device is

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travelling on an expressway, the overlay screen is likely to be magnified to a lesser degree than if the device is travelling on a side street. This concept roughly parallels the concept of speed classification, additionally disclosed in the present application. More specifically, if the device is travelling on the expressway, and therefore travelling faster, a driver is likely to need the information provided by the overlay screen sooner. The driver is also likely to need the information provided by the overlay screen to be broader in scope, rather than extremely detailed, and therefore be magnified to a lesser degree. In contrast, if the device is travelling on the side street, and therefore travelling slower, the driver is likely to need the information provided by the overlay screen later in order to avoid confusion or turning too soon. The driver is also likely to need the information provided by the overlay screen to be more detailed, as there are likely more turn options available, and therefore be magnified to a greater degree. Thus, as claimed in claim 4, the magnification of the overlay screen is dependent upon the road classification of the thoroughfare.

In contrast, none of the references made of record discloses this dependency. While Abe does disclose road classifications, which may be used to switch to an enlarged display, the magnification of the enlarged display is fixed and not dependent upon the road classifications, as claimed in claim 4. Similarly, while Nanba discloses deciding how far in advance to display turn arrows based on a road type, the arrows magnification is not dependent upon the road type. Finally, Berstis doesn't appear to even disclose road classification at all. As a result, neither Abe, Berstis, nor Nanba discloses, suggests, or makes obvious "wherein the magnified display scale [of the overlay screen] is a dynamic

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display scale based on a road classification for a thoroughfare on which the device is currently traveling", as claimed in claim 4.

Claim 18 recites "wherein the device is adapted to remove insignificant detail from the geographic detail at the decision point based on a set of criteria". It should be noted that, according to claim 10 from which claim 18 depends, the overlay screen depicts this geographic detail. The set of criteria may include, as recited in claim 19, "whether a nearby thoroughfare in the cartographic data intersects with a thoroughfare on which the device is currently traveling". For example, there may be several roads near the thoroughfare on which the device is currently travelling, but some of those roads may not actually intersect with that thoroughfare, such as roads parallel thereto or roads traversing overpasses and underpasses. By removing these roads that do not intersect with the thoroughfare on which the device is currently travelling, and therefore do not present opportunities to turn, the overlay screen can be simplified and the information thereon more easily understood.

In contrast, none of the references made of record discloses removing such insignificant detail from an overlay screen. Rather, as discussed above, Abe discloses no overlay screen at all and Nanba's turn arrows are completely static with no detail that could be considered insignificant. In fact, Berstis discloses just the opposite. For example, Berstis' photographic image is likely to contain a vast amount of detail that would be insignificant. Furthermore, as Berstis' image is a photograph, removing detail therefrom would be practically impossible. Thus, the references made of record simply do not disclose, suggest, or make obvious "wherein the device is adapted to remove insignificant

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detail from the geographic detail at the decision point based on a set of criteria", as claimed in claims 18 and 19.

Claim 20 recites displaying "an overlay screen on top of any presently displayed screen, the overlay screen adapted to display a preview of the decision point with a **highlighted portion indicating a course to follow through the decision point**" and **"displaying motion of the device through the course on the overlay screen"**, emphasis added. Similarly, claim 28 recites displaying "an overlay screen on the navigation device to display a preview of a decision point, the overlay screen including cartographic data accurately depicting a geographic detail of the decision point with a **highlighted portion indicating a course to follow through the decision point, and the overlay screen displaying motion of the navigation device on the course through the decision point**", emphasis added. Thus, as in claims 1 and 10, the overlay screen itself displays both the "highlighted portion" of a route and "motion of the device". In contrast, as discussed above with respect to claims 1 and 10, the references made of record simply do not disclose, suggest, or make obvious overlay screen displaying both the "highlighted portion" of a route and "motion of the device", much less the other limitations of claims 20 and 28.

Claim 22 recites "wherein providing the geographic detail includes providing the geographic detail in a dynamic magnified display scale in comparison to a display scale of the presently displayed screen based on a road classification for a thoroughfare on which the device is currently traveling". Thus, as in claim 4, the magnified scale is dependent upon the road classification. In contrast, as discussed above with respect to claim 4, the

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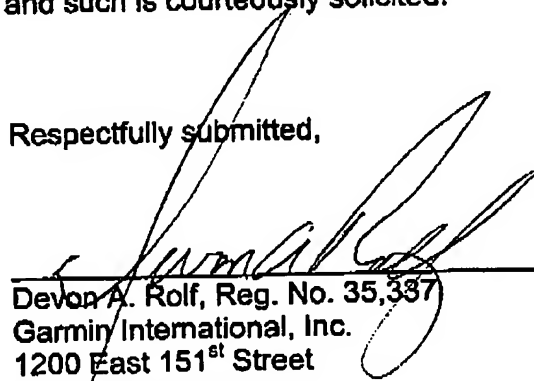
references made of record simply do not disclose, suggest, or make obvious any magnification scale being dependent upon any road classification, much less the other limitations of claim 22.

Claims 43-46 have been added to further distinguish the present invention from the prior art. The remaining claims all depend directly or indirectly from independent claims 1, 10, 20, or 28 and are therefore also allowable. It should be noted that claims 16 and 34 have been amended to correct typographical errors and amendments thereto are not intended to be limiting.

Any additional fee which is due in connection with this amendment should be applied against our Deposit Account No. 501-791. In view of the foregoing, a Notice of Allowance appears to be in order and such is courteously solicited.

Respectfully submitted,

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